AngelEye™

User Manual

CARBON MONOXIDE ALARM

CO-FA-AE-9B

www.angeleye.com

EN 50291-1: 2010
EN 50291-2: 2010
KM 551504

GN3478R1

CO-FA-AE-9B Carbon Monoxide Alarm

A Sprue Brand

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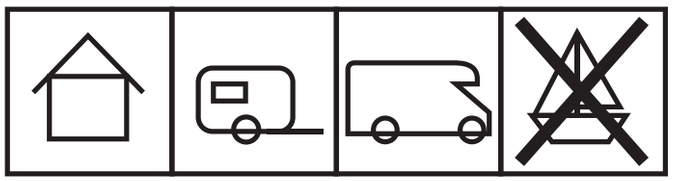
NOTE: This user manual is also available in large text and other formats. Please call **0800 141 2561** for further information.

FEATURES

- An advanced electrochemical sensor designed to accurately measure low levels of carbon monoxide (CO) providing an early warning of toxic CO levels in your home.
- Detects carbon monoxide continuously.
- Resistant to false alarms caused by normal household contaminants.
- Sounds a loud 85dB alarm (at 1m/3 feet) to alert you in case of an emergency.
- Test/ 🔇 button - regularly self-check to ensure alarm is operating correctly.
- Simple to mount, portable, ideal for travelling.
- Certified to the European Standards for Carbon Monoxide Alarms EN 50291-1: 2010, EN 50291-2: 2010.
- 7 year warranty.

POSITIONING

This CO alarm is suitable for use in domestic premises, caravan holiday homes, caravans and motor caravans.



The following advice is applicable to all intended applications, there are special instructions at the end of this section relating to positioning in caravan holiday homes, caravans and motor caravans.

WARNING: This alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas.

In which room should the alarm be installed?

Ideally, an alarm should be installed in every room containing a fuel-burning appliance and every sleeping room. Additional alarms may be installed to ensure that adequate warning is given for occupants in other rooms, in which they spend considerable time whilst awake and from which they may not be able to hear an alarm in another part of the premises.

CO alarms should also be installed in any room which a flue passes through, even if the flue is fully enclosed or concealed.

However, if there is a fuel-burning appliance in more than one room and the number of alarms is limited, the following points should be considered when deciding where best to put the alarm:

- Locate the alarm in a room containing a flueless or open-flued appliance.

- Locate the alarm in a room where the occupant(s) spend most time.
- If the domestic premises is a bedsit (a single room serving as both sitting and bedroom) then the alarm should be put as far from the cooking appliances as possible and near to where the person sleeps.
- If the appliance is in a room not normally used (for example a boiler room), the alarm should be put just outside the room so that it may be heard more easily.

Where in the room should I place the alarm?

For alarms located in the same room as a fuel-burning appliance (for both wall and ceiling mounted alarms) the following applies:

- The alarm should be at a horizontal distance of between 1 m and 3 m from the potential source.
- If there is a partition in a room, the alarm should be located on the same side of the partition as the potential source.
- Carbon monoxide alarms in rooms with sloped ceilings should be located at the high side of the room.

In addition to the above the following must be observed if the alarm is located on a wall:

- It should be located close to the ceiling.
- It should be located at a height greater than the height of any door or window.
- It should be at least 150 mm from the ceiling.
- If the alarm is located on the ceiling:
- It should be at least 300 mm from any wall and any ceiling obstruction e.g. light fittings.

Alarms located in sleeping rooms and in rooms remote from a fuel-burning appliance should be located relatively close to the breathing zone of the occupants.

Caravans

Caravans may have additional risks of carbon monoxide ingress through air vents due to the nearby presence of other vehicles, engines, generators or barbecues, however this does not change the basic guidance on location of the alarm. Caravans should be fitted with an alarm in the same room as any combustion appliance(s), located in accordance with previous advice in this section. If the caravan has a single living space which incorporates the sleeping accommodation, it can be considered to be equivalent to a bedsit, and a single alarm is sufficient. However, any sleeping

accommodation which is in a separate room from the combustion appliance(s) should also contain an alarm, located in accordance with previous advice in this section.

It is not always possible to find an optimum location for an apparatus, for example, a small caravan may not have suitable vertical surfaces available. Nevertheless, when fitting an apparatus in such situations, the two most important considerations when selecting an appropriate location are:

- Not mounting the apparatus directly above a source of heat or steam; and
- Mounting the apparatus at a distance of 1 – 3 m from the nearest edge of the potential source.

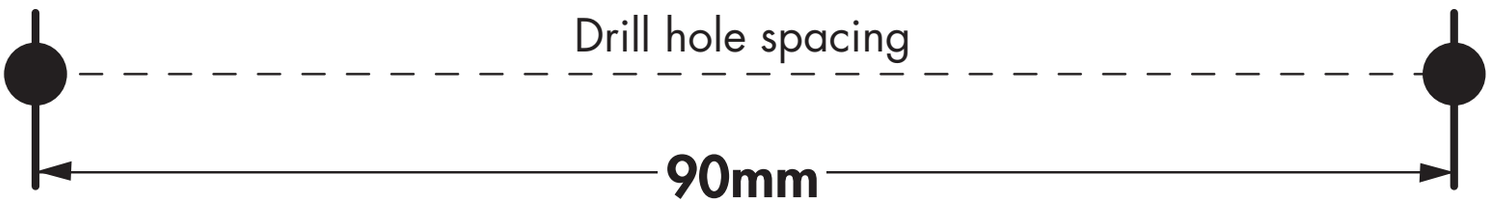
INSTALLATION

NOTE: This apparatus should be installed by a competent person who feels able to install it according to the instructions.

Firstly write the installation date on your alarm in the area provided. We recommend that your alarm is installed on the wall.

To mount on a wall or ceiling:
Please ensure that you use the screws provided, as they were chosen specifically for use with this product. Use template below for guidance on marking hole positions. Drill holes into the wall. Insert the plastic wall plugs. Screw in the screws. Ensure screws are protruding from the wall by 3mm to allow the alarm to slot onto screws.

To place on a shelf:
The base of the alarm has been designed to allow it to stand freely on a shelf.

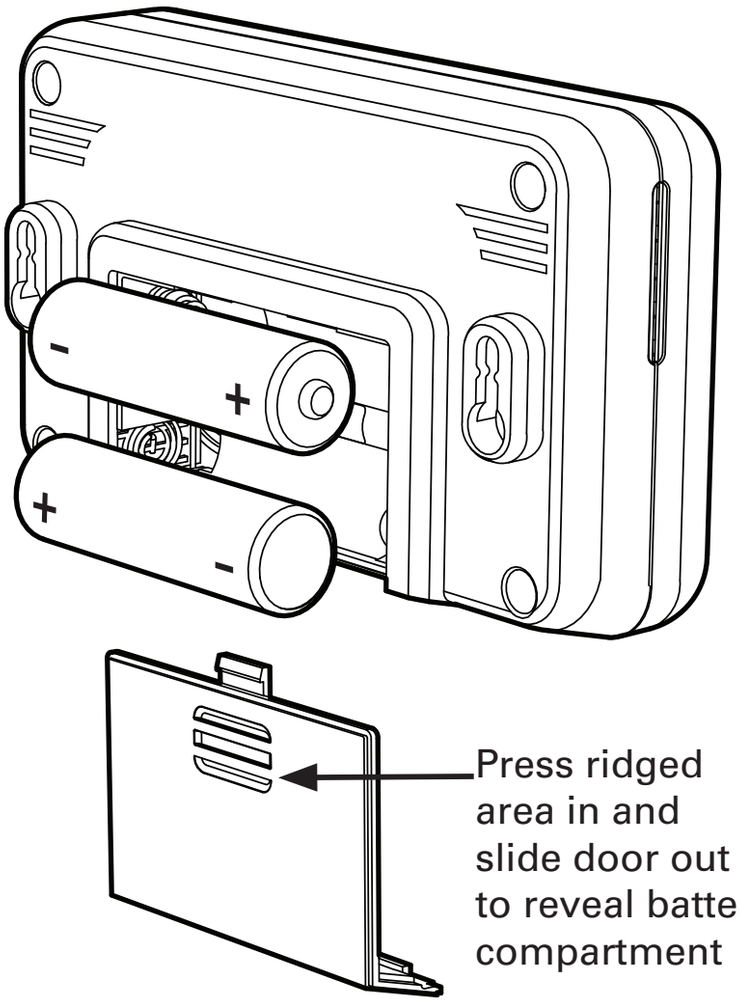


BATTERY REPLACEMENT

a If the alarm is already wall or ceiling mounted then unhook it from the mounting screws.

b Remove the battery cover located on the back of the alarm.

c Replace the batteries with 2 x approved 1.5 volt AA size alkaline batteries (see page 14 for recommended batteries), making sure the batteries are the correct way round. Use of batteries other than those recommended by Sprue Safety Products Ltd may have a detrimental effect on the alarm's operation. Replace the battery cover and return the alarm to its original position.



d Your advanced alarm requires a short 'warm-up' period before it is fully operational.

If you have followed all of the above steps correctly, your unit will begin monitoring for CO in around 3 minutes. When the 3 minute warm-up period is complete, the Power LED will flash green once per minute to indicate that the alarm is receiving power from the batteries and is fully operational.

e Test the sounder, batteries and circuitry by pressing and holding the Test button for 1 second. The sounder should sound as soon as the button is pressed, and the Alarm LED will illuminate red for a short time indicating that the sounder is working and the batteries are providing power to the unit. This test for the sounder, batteries and circuitry should be performed weekly.

WARNING: Prolonged exposure to the sounder in close proximity to your ears may damage your hearing.

Under normal operating conditions, the batteries should last for at least 12 months.

The alarm will not protect against the risk of carbon monoxide poisoning when the batteries have drained.

WARNING: Prolonged exposure to extreme high or low temperatures may reduce the life of the batteries.

OPERATING FEATURES

Test / 🔇× button feature

This button will:

- Test the sounder, batteries and circuitry.
- Allow you to test the sensor by introducing a source of CO into the alarm (see 'Testing The Sensor' below).
- Silence the loud 85dB sounder during an alarm (only possible when current CO level is less than 50ppm).

Testing the sounder, batteries and circuitry

Test the sounder, batteries and circuitry by pressing and holding the Test button for 1 second to confirm that the alarm is operating properly. The sounder should sound as soon as the button is pressed, and the Alarm LED will illuminate red, indicating that the sounder is working and the batteries are providing power to the unit. This test for the sounder, batteries and circuitry should be performed weekly.

Testing the sensor

NOTE: Aerosol CO test kits or incense sticks may be used to test the sensor. Alternative sources of smoke, for example an extinguished candle or match, will not contain sufficient levels of carbon monoxide to obtain a response from the alarm during this test. Please note your CO alarm will not detect smoke.

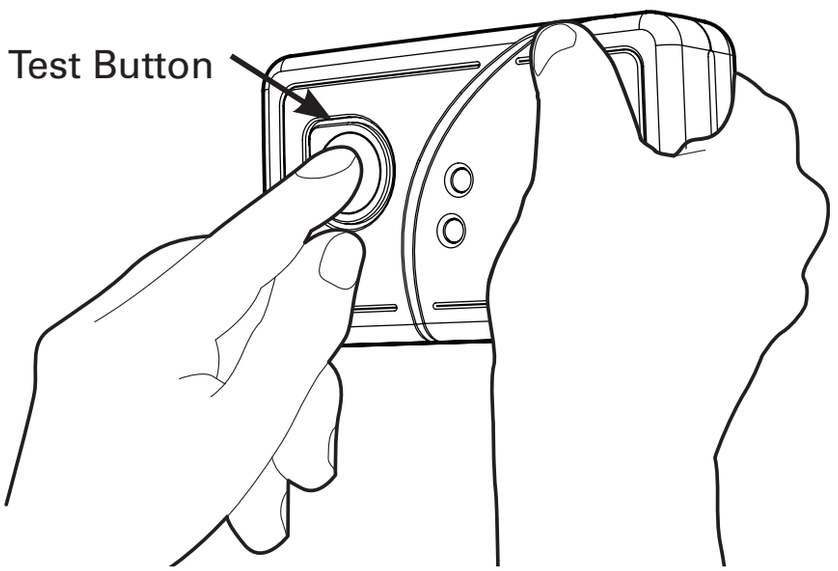
If testing the sensor for the first time after installation, or replacing the batteries, make sure that the alarm has completed the initial 3 minute warm up period and the power LED is flashing green once every minute.

CAUTION: Sensor testing should only be performed by a responsible adult.

- Read all steps thoroughly before attempting to test your the sensor

Step 1 If the alarm is wall or ceiling mounted unhook the alarm from the screws.

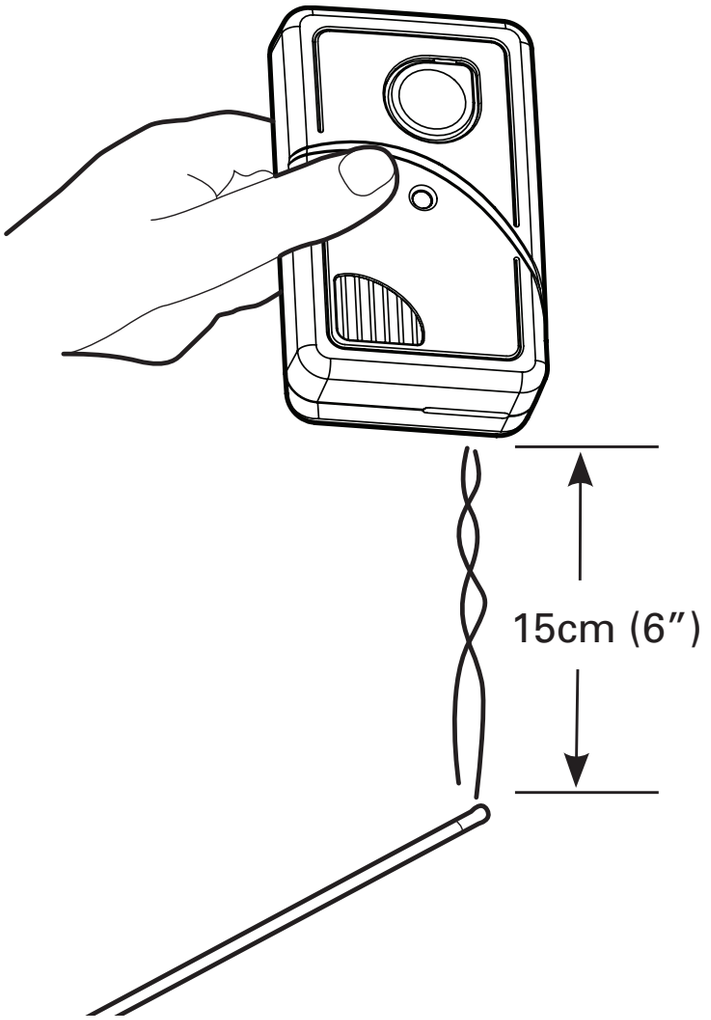
Step 2 Cover the sounder vents with one hand. Press and hold the Test button down with your thumb/finger until the Power LED illuminates green and the sounder sounds for a second time (this should happen after around 5 seconds).



Release the Test button. Upon releasing the Test button the Power LED will flash green once every second. This indicates that the sampling rate of the alarm has increased and can be tested using a known source of CO.

Step 3 Light an incense stick using a match or lighter. Be sure to blow out the flame so that the incense stick is smouldering. Extinguish the lighter, or put out the match and place it into a dish of water.

Step 4 Turn the alarm on its side so that the vents on the right hand side of the alarm are pointing downwards (see diagram opposite). Hold the burning incense stick around 15cm (6 inches) below the alarm, so that the smoke enters the vents on the side of the alarm.



An increase in the localised carbon monoxide level within the sensor to more than 50ppm will cause the sounder to sound for one cycle of four loud beeps and the Power LED to illuminate green for a short time. This is the end of the test. The Power LED will no longer flash green every second but will revert to flashing once every minute as the alarm will go back to normal operating mode (It may take up to two minutes of exposure to the smoke for the localised level of carbon monoxide within the sensor to reach over 50ppm). Now move the source of CO away from the alarm as the test is finished.

Step 5 After step 4, put out the incense stick by placing it into a dish of water. Ensure that all flames have been extinguished.

NOTE: If the localised carbon monoxide level within the sensor does not reach 50ppm during the test, the sensor test will stop automatically after 3 minutes.

ALARM TEST

Test the sounder, power pack and circuitry by pressing and releasing the Test / 🔇 button to confirm that the alarm is operating properly. The alarm should sound as soon as the Test button is pressed, and the Alarm LED will illuminate red indicating that the sounder is working and the power pack is providing power to the unit. This test should be performed on a weekly basis.

UNDERSTANDING THE PRODUCT'S INDICATORS

The higher the concentration of carbon monoxide detected by the alarm, the quicker it will respond. When sufficient carbon monoxide is detected a loud audible signal (85 dB at 1m/3 feet) will be emitted and the Alarm LED will flash red once every second.

The Alarm will sound:

- Between 60 and 90 minutes when exposed to 50ppm of CO.
- Between 10 and 40 minutes when exposed to 100ppm of CO.
- Within 3 minutes when exposed to 300ppm or more.

Fault:

The unit continuously checks the settings of its sensor and circuitry. If any of these settings are found to be incorrect or if the batteries become low then the alarm will emit a single audible chirp once per minute for up to 30 days. **IMPORTANT:** This does NOT mean that the alarm has detected carbon monoxide.

Replace batteries immediately. If the product continues to chirp despite having new batteries and the product is still within warranty then contact technical support for advice. If the product is no longer in warranty replace it immediately!

WHAT TO DO IN THE EVENT OF AN ALARM

WARNING: A loud alarm is a warning that unusually high and potentially lethal levels of carbon monoxide are present. Never ignore this alarm, further exposure can be fatal. Immediately check residents for symptoms of carbon monoxide poisoning, and contact the proper authorities to resolve all CO problems. **NEVER IGNORE ANY ALARM.**

Please carefully review this owner's manual to ensure that you know what actions to take in the event of an alarm.

What to do during an alarm:

- Keep calm and open the doors and windows to ventilate the property.
- Stop using all fuel burning appliances and ensure, if possible, that they are turned off.
- Evacuate the property leaving the doors and windows open.
- Ring your gas or other fuel supplier on their emergency number; keep the number in a prominent place.

Write your fuel supplier's emergency number here:

_____

- Do not re-enter the property until the alarm has stopped. When exposed to fresh air it can take up to 10 minutes for the sensor to clear and the alarm to stop depending on the level of carbon monoxide detected.
- Get medical help immediately for anyone suffering the effects of carbon monoxide poisoning (headache, nausea), and advise that carbon monoxide poisoning is suspected.
- Do not use the appliances again until they have been checked by an expert. In the case of gas appliances the engineer must be registered.

CARBON MONOXIDE AND HOW IT CAN AFFECT YOU AND YOUR FAMILY

Carbon monoxide is a poisonous gas that kills and injures hundreds of people each year. It is often referred to as the silent killer, it has no odour or taste and cannot be seen. Like oxygen, CO enters the body through the lungs during the normal breathing process. It competes with oxygen by replacing it in the red blood cells, thereby reducing the flow of oxygen to the heart, brain and other vital organs. In high concentrations, CO can kill in minutes.

Many cases of reported carbon monoxide poisoning indicate that while victims are aware they are not feeling well, they become disorientated and unable to save themselves by either exiting the building or calling for assistance. Exposure during sleep is particularly dangerous because the victim usually does not wake up.

Symptoms of CO poisoning

The following symptoms may be related to CO poisoning which all household members should be made aware of:

- **Mild Exposure:** Slight headache, nausea, vomiting, fatigue (often described as 'flu-like' symptoms).
- **Medium Exposure:** Severe throbbing headache, drowsiness, confusion, fast heart rate.
- **Extreme Exposure:** Unconsciousness, convulsions, cardiorespiratory failure, death.

Your CO alarm monitors the level of CO as parts per million (ppm) in the atmosphere surrounding the alarm.

35ppm The maximum allowable concentration for continuous exposure for healthy adults in any 8 hour period, as recommended by the Occupational Safety and Health Administration (OSHA).

200ppm Slight headache, fatigue, dizziness, nausea after 2 - 3 hours.

400ppm Frontal headaches within 1 - 2 hours, life threatening after 3 hours.

800ppm Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2 - 3 hours.

Should you suspect CO may be affecting you or your family, open the doors and windows of your property to ventilate, turn off your appliances and evacuate the premises. At this time the authorities should be contacted to locate the source of the carbon monoxide before re-entering the building. Medical attention should be sought for anyone suffering the effects of CO poisoning.

Common sources of CO:

- Oil and gas boilers
- Portable generators
- Oil or solid fuel cookers
- Gas or paraffin heaters
- Barbecues
- Clogged chimneys
- Gas, wood or coal fireplaces
- Cigarette smoke
- Gas appliances
- Any fossil fuel burning appliance

WARNING: This carbon monoxide alarm is not a combustible gas detector, nor a smoke detector. Please install the proper detectors to detect combustible gases, or smoke.

This CO alarm should not be seen as a substitute for the proper installation, use, and maintenance of fuel-burning appliances (including appropriate ventilation and exhaust systems), nor the sweeping of chimneys.

WARNING: Do not use this carbon monoxide alarm on an intermittent basis, or as a portable alarm for trying to trace one source of the spillage of combustion products from fuel-burning appliances or from chimneys.

DO NOT:

- IGNORE ANY WARNING FROM YOUR CO ALARM!
- Burn charcoal inside your home, caravan, tent or cabin.
- Install, convert or service fuel-burning appliances without proper knowledge, skill and expertise.

- Use a gas cooker for heating a room
- Do not barbecue indoors, or in an attached garage.
- Operate unvented gas burning appliances using paraffin or natural gas in closed rooms.
- Operate petrol-powered engines indoors or in confined areas.
- Ignore a safety device when it shuts an appliance off.

ALWAYS:

- Buy appliances accepted by a recognised testing laboratory.
- Install appliances according to the manufacturer's instructions.
- Have appliance installations carried out by professionals (for gas appliances engineers should be registered).
- Have your appliances checked regularly by a qualified service engineer.
- Have your chimneys and flues cleaned professionally every year.
- Make regular visual inspections of all fuel-burning appliances.
- Open windows when a fireplace or oil/ solid fuel cooker is in use.
- Only install CO alarms that meet the requirements of EN 50291-1: 2010 and EN 50291-2: 2010 in your home.
- Be aware of CO poisoning symptoms.

Educate yourself and your family on the sources and symptoms of co poisoning and how to use your carbon monoxide alarm.

TECHNICAL INFORMATION

Detector Specifications: Model CO-FA-AE-9B.

Sensor Type: Electrochemical.

Sensor Life: 7 Years.

Alarm Sound Level: 85dB at 1m/3 feet

Recommended Batteries: Size AA Alkaline - Duracell LR6, Energizer LR6, Gold Peak 15A.

Battery Life: Exceeds 1 year under normal operating conditions, replaceable.

Temperature Range: -10°C (14°F) to 40°C (104°F).

Operating Humidity Range: 30 - 90% RH

Weight (inc. batteries): 125 grams (4.4oz)

Certified to: EN 50291-1: 2010, EN 50291-2: 2010.

This carbon monoxide alarm is designed to continuously monitor for CO. Its response times meet the requirements of the European standard EN 50291-1: 2010, EN 50291-2: 2010.

The alarm will sound:

- Between 60 and 90 minutes when exposed to 50ppm of CO.
- Between 10 and 40 minutes when exposed to 100ppm of CO.
- Within 3 minutes when exposed to CO levels of 300ppm or more.

WARNING: apparatus conforming to this standard may not protect people who are at special risk from carbon monoxide exposure by reason of age, pregnancy or medical condition. If in doubt, consult your doctor.

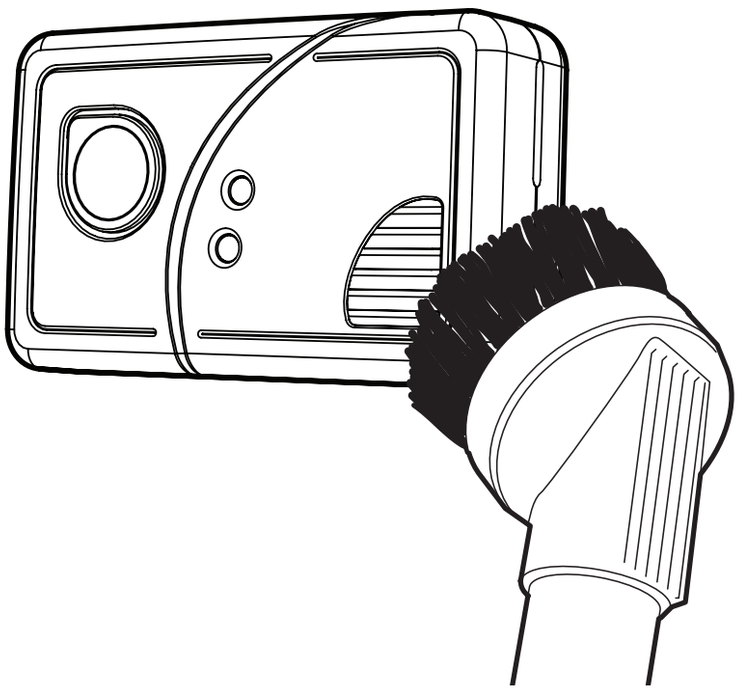
The CO-FA-AE-9B has an operational lifetime of 7 years from the date it is installed and activated. Record the date of installation in the area provided on the alarm and replace unit after 7 years of operation.

MAINTENANCE

Your CO alarm will alert you to potentially hazardous CO concentrations in your home when maintained properly. Keep the alarm free from dust by gently vacuuming the case with a soft brush attachment every 3 months.

To prevent the possibility of contaminating the sensor in your alarm and thus affecting its reliability:

- Never use cleaning solutions on your alarm. Simply wipe with a slightly damp cloth.
- Do not paint the alarm.
- Do not spray aerosols on or near the alarm.
- Do not use any solvent based products near the alarm.
- Do not attempt to repair your CO alarm.
- Do not remove any screws or open the main casing of your CO alarm. Any attempt to do so may cause malfunction and will invalidate the warranty.



DISPOSAL

Waste electrical products should not be disposed of with your other household waste. The alarm is ideally suited for disposal within the waste electronic and electrical equipment (WEEE) recycling scheme. Please recycle where facilities exist. Check with your local authority, retailer or contact our Technical Support team for recycling/ disposal advice, as regional variations apply.

WARNING: Do not burn or dispose of in fire.

WARNING: If your alarm is dropped or damaged, as a precaution, it should be removed from the building.

WARRANTY

Sprue Safety Products Ltd warrants to the original purchaser that its enclosed CO alarm be free from defects in materials and workmanship under normal residential use and service for a period of 7 years from the date of purchase. Provided product is sent back to Sprue Safety products with proof and date of purchase, Sprue Safety Products Ltd hereby warrants that during the 7 year period commencing from the date of purchase Sprue Safety Products Ltd, at its discretion, agrees to replace the unit free of charge.

The warranty on any replacement CO-FA-AE-9B alarm, will last for the remainder of the period of the original warranty in respect of the alarm originally purchased – that is from the date of original purchase and not from the date of receipt of the replacement product. Sprue Safety Products Ltd reserves the right to offer an alternative product similar to that being replaced if the original model is no longer available or in stock. This warranty applies to the original retail purchaser from the date of original retail purchase and is not transferable. Proof of purchase is required. This warranty does not cover damage resulting from accident, misuse, disassembly, abuse or lack of reasonable care of the product, or applications not in accordance with the user guide. It does not cover events and conditions outside of Sprue Safety Products Ltd's control, such as Acts of God (fire, severe weather etc.). It does not apply to retail stores, service centres or any distributors or agents. Sprue Safety Products Ltd will not recognise any changes to this warranty by third parties.

Sprue Safety Products Ltd shall not be liable for any incidental or consequential damages caused by the breach of any expressed or implied warranty. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose is limited in duration for 7 years. This warranty does not affect your statutory rights. Except for death or personal injury, Sprue Safety Products Ltd shall not be liable for any loss of use, damage, cost or expense relating to this product or for any indirect or consequential loss, damages or costs incurred by you or any other user of this product.